

AREA	TOTAL AREA m ² (ha)
EXISTING IMPERMEABLE	390m ² (0.039ha)
PROPOSED IMPERMEABLE	550m ² (0.055ha)

*TOTALS FOR HECTARES (ha) AND METERS SQUARED (m²) DIFFER SLIGHTLY DUE TO ROUNDING AND ACCUMULATION OF INDIVIDUAL AREAS.

BROWNFIELD RUNOFF RATES	
RETURN PERIOD (YEARS)	FLOW RATE (l/s)
EXISTING	2.7 l/s
PROPOSED	2.7 l/s

PROPOSED DRAINAGE IS PRELIMINARY ONLY AND IS SUBJECT TO DETAILED DESIGN.

SURFACE WATER PRINCIPLES

NPPG HIERARCHY OF SURFACE WATER DRAINAGE

THE NATIONAL PLANNING PRACTICE GUIDANCE SETS OUT THE HIERARCHY OF DRAINAGE TO PROMOTE THE USE OF SUSTAINABLE DRAINAGE SYSTEMS, BY ALIGNING MODERN DRAINAGE SYSTEMS WITH NATURAL WATER PROCESSES. THE AIM OF HIERARCHY OF DRAINAGE IS TO DRAIN SURFACE WATER RUN-OFF AS SUSTAINABLE, AS REASONABLY PRACTICABLE.

AS STATED IN THE NATIONAL PLANNING PRACTICE GUIDANCE, THE AIM SHOULD BE TO DISCHARGE SURFACE WATER RUN-OFF AS HIGH UP THE DRAINAGE HIERARCHY, AS REASONABLY PRACTICABLE:

- INTO THE GROUND (INFILTRATION).
- TO A SURFACE WATER BODY.
- TO A SURFACE WATER SEWER, HIGHWAY DRAIN, OR ANOTHER DRAINAGE SYSTEM.
- TO A COMBINED SEWER.

INFILTRATION

BGS MAPS SHOW SANDSTONE AND MUDSTONE BEDROCK ON AND SURROUNDING THE SITE. LANDIS MAPS INDICATE "IMPEDED DRAINAGE" SOIL. FURTHERMORE, THE LOCATION OF THE WATERCOURSE AT THE EAST OF SITE AT THE LOWEST LEVELS INDICATES THAT A SOAKWAY WOULD FLOW INTO THE WATERCOURSE ANYWAY. THIS INDICATES THAT WE DO NOT CONSIDER SOAKWAYS TO BE SUITABLE FOR THIS SITE.

WATERCOURSE

IF INFILTRATION HAS BEEN DISCOUNTED AS A VIABLE SOLUTION, THE NEXT METHOD IN PRIORITY SHOULD BE TO DISCHARGE TO A WATERCOURSE OR SURFACE WATER BODY.

AN ASSESSMENT OF THE UK RIVER MAPS SHOWS A WATERCOURSE APPROXIMATELY 70m FROM THE PROPOSED BUILDINGS AND WITHIN THE BOUNDARY, ZECHARIAH BROOK. AN EXISTING SURFACE WATER SEWER DISCHARGING INTO THE WATERCOURSE WAS FOUND ON SITE, WITH A MANHOLE SUITABLE FOR DISCHARGING INTO ON SITE.

FOLLOWING THE ABOVE ASSESSMENT, IT HAS BEEN DETERMINED THAT THE EXISTING SURFACE WATER SEWER ON SITE SHOULD BE USED FOR DISCHARGING THE SURFACE WATER FLOWS INTO THE WATERCOURSE.

SURFACE WATER DESIGN

FURTHER TO THE ASSESSMENT OF THE SURFACE WATER HIERARCHY, THE DESIRED OUTFALL FOR THE SURFACE WATER DRAINAGE IS THE EXISTING SURFACE WATER SEWER WHICH ULTIMATELY DISCHARGES TO ZECHARIAH BROOK ON THE EASTERLY SIDE OF SITE.

RUN-OFF RATES

IN LINE WITH CURRENT NATIONAL GUIDANCE AND SUSTAINABLE DRAINAGE SYSTEMS GUIDANCE - 2022 UPDATE, SECTION 4.2, THE EXISTING IMPERMEABLE AREAS ARE BEING TREATED AS BROWNFIELD AND THE NEWLY PROPOSED IMPERMEABLE AREAS ARE BEING TREATED AS GREENFIELD FOR THE PURPOSE OF THE DRAINAGE DESIGN ONLY.

THE BROWNFIELD EXISTING IMPERMEABLE AREA FOR THE DEVELOPMENT IS 390m², THE PROPOSED DISCHARGE RATE QMAX BROWNFIELD RATE FOR THE DEVELOPMENT IS 2.7l/s.

THEREFORE THE TOTAL PROPOSED DISCHARGE RATE IS ENTIRELY BROWNFIELD.

THE DEVELOPMENT MUST SEEK TO RESTRICT THE PROPOSED SURFACE WATER FLOWS FOR A 1 IN 1, 30 AND 100 YEAR RETURN PERIODS WITH AN APPROPRIATE ALLOWANCE FOR CLIMATE CHANGE.

PROPOSED DISCHARGE RATE: 2.70 l/s

CLIMATE CHANGE

IN LINE WITH THE LATEST WHICH GUIDANCE SETS CLIMATE CHANGE ALLOWANCES BASED ON RIVER BASIN MANAGEMENT CATCHMENTS. THE CLIMATE CHANGE ALLOWANCES FOR THE DEVELOPMENT SHOULD BE SET IN LINE WITH THE BELOW:

RIBBLE MANAGEMENT CATCHMENT

2070S EPOCH - CENTRAL ALLOWANCE.

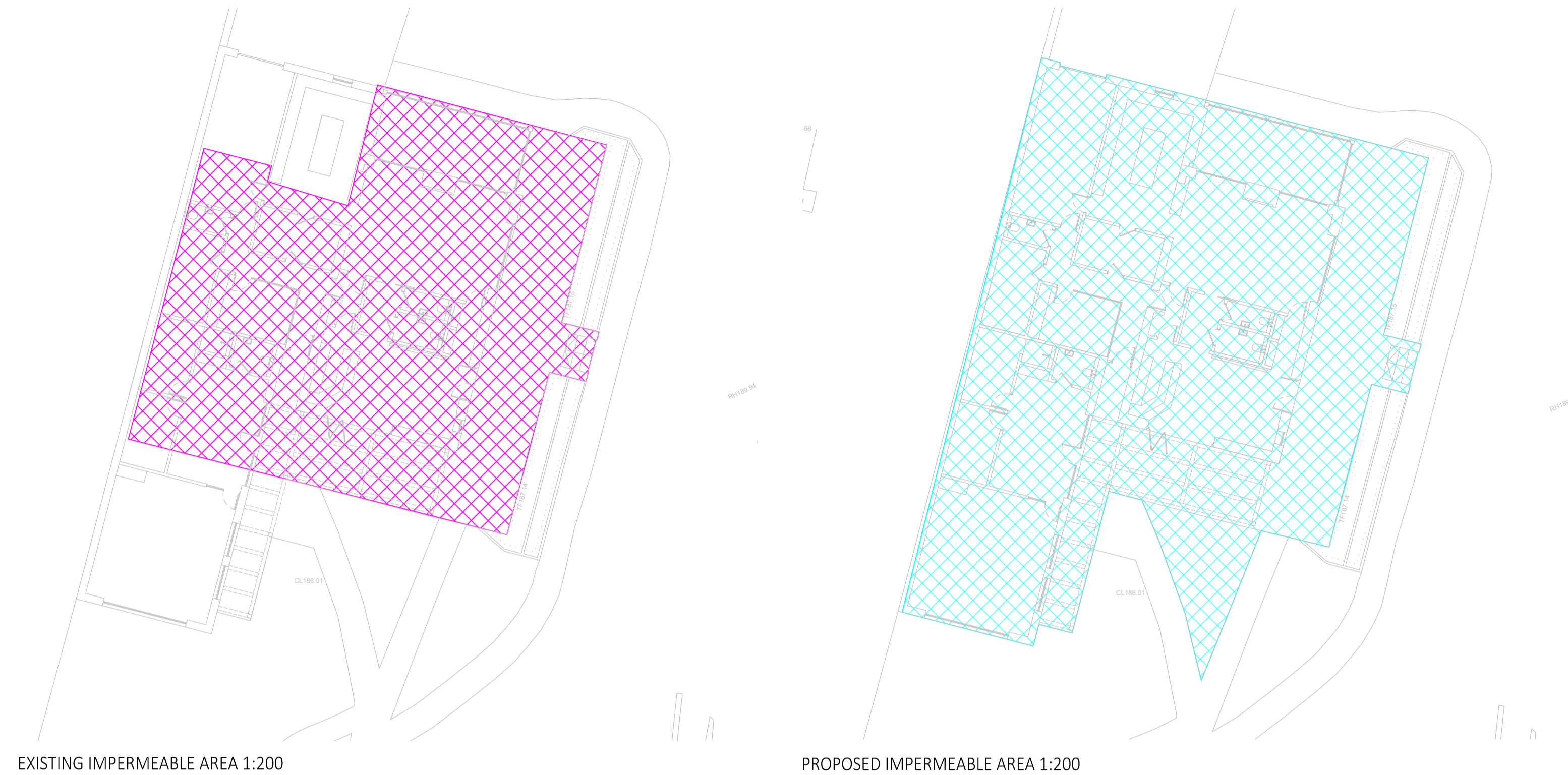
3.3% (1 IN 30 YEAR): 30%
1% (1 IN 100 YEAR): 35%

PROPOSED DRAINAGE SYSTEM

TO RESTRICT PROPOSED FLOWS TO A RATE OF 2.70 l/s, THE PROPOSED DRAINAGE SYSTEM SHOULD SEEK TO IMPLEMENT SOURCE CONTROL SUDS METHODS WHERE POSSIBLE AND AN ATTENUATION SYSTEM TO STORE THE RESTRICTED FLOWS.

FOUL WATER DESIGN

AFTER A REVIEW OF THE EXISTING DRAINAGE RECORDS, THERE IS A SUITABLE EXISTING COMBINED SEWER ON SITE, WITH MANHOLES IN PLACE FOR THE PREVIOUS BUILDING. THEREFORE THIS IS SUITABLE TO DISCHARGE FOUL WATER TO. THERE IS ALSO A TREATMENT PLANT ON SITE.



EXISTING IMPERMEABLE AREA 1:200

PROPOSED IMPERMEABLE AREA 1:200

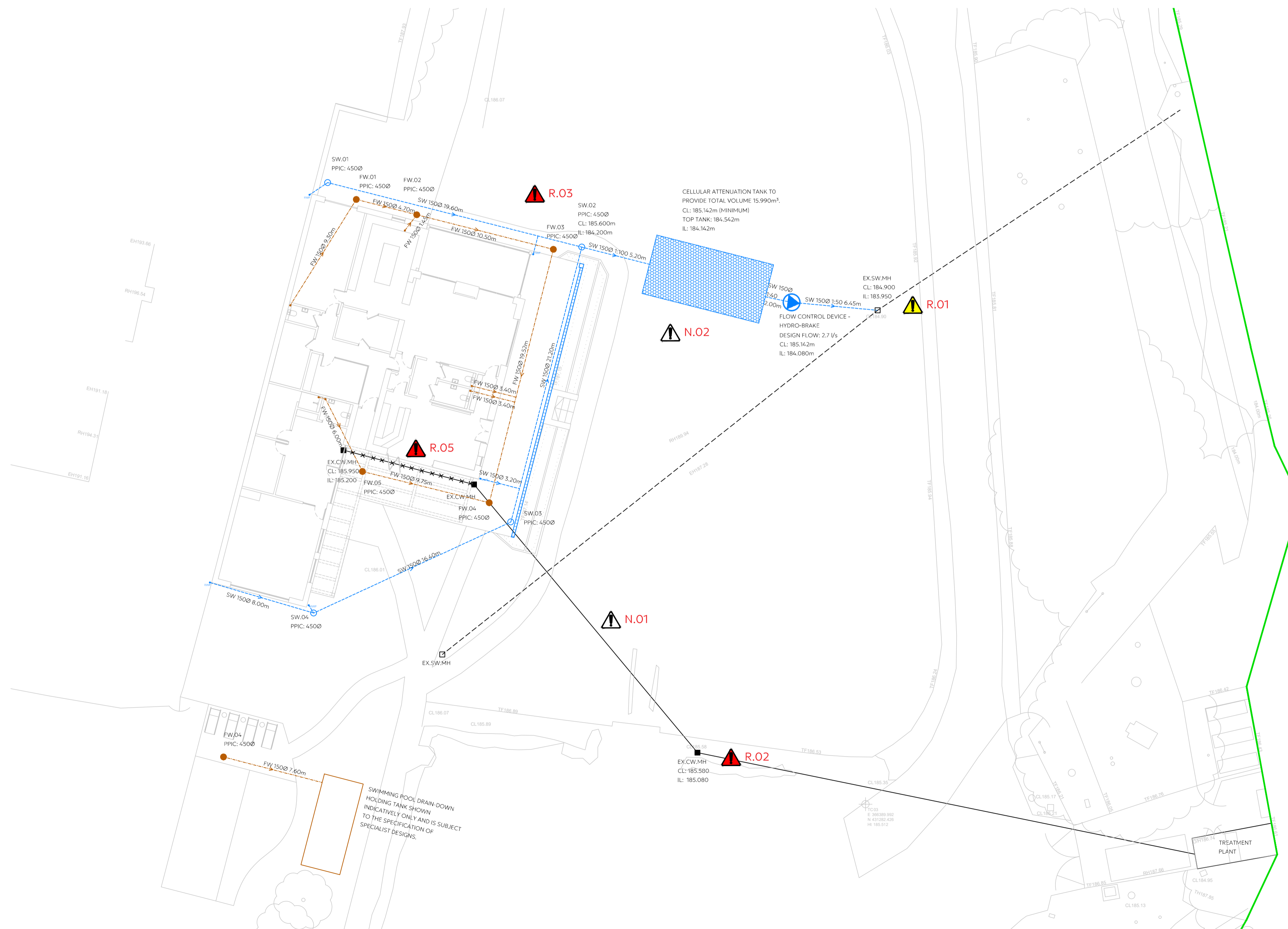
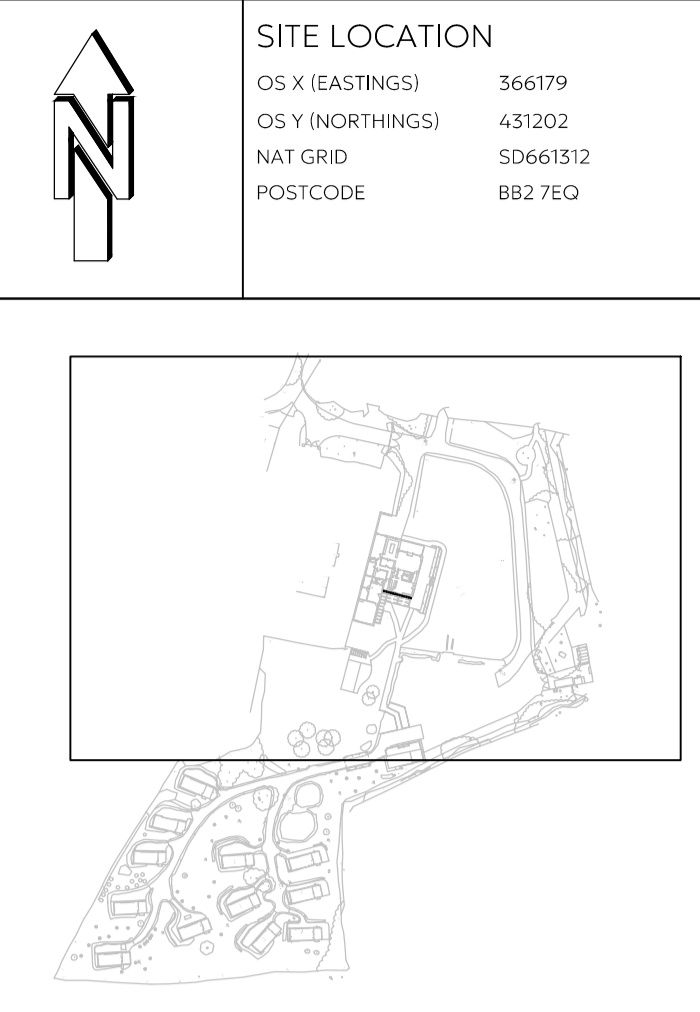


TABLE 1: DESIGNERS RISK ASSESSMENT		
RISK REFERENCE	RISK DESCRIPTION	RISK CONSIDERATION/ MITIGATION
⚠️ R.01	RISK 1. REUSE OF EXISTING DRAINAGE	A CCTV SURVEY IS REQUIRED TO REVIEW THE CONDITIONS OF EXISTING DRAINAGE. PROPOSED DRAINAGE TO BE REVIEWED IN LINE WITH CCTV FINDINGS.
⚠️ R.02	RISK 2. EXISTING SEWER LEVELS	PROPOSED SURFACE AND FOUL WATER TO BE COORDINATED WITH EXISTING SEWER LEVELS TO ENSURE NO CLISHES.
⚠️ R.03	RISK 3. INVERT LEVELS FOR PROPOSED DRAINAGE ARE ASSUMED.	ACTUAL INVERT LEVEL TO BE CONFIRMED BEFORE SITE WORKS COMMENCE.
⚠️ R.04	RISK 4. PROPOSED DRAIN DOWN FROM THE SWIMMING POOL.	THE BACKWASH WATER MUST BE STORED AND TANKERED AWAY FOR SUITABLE DISPOSAL OFF SITE. IT IS THE RESPONSIBILITY OF THE OWNER TO ENSURE THAT THE SWIMMING POOL DRAIN DOWN AND BACKWASH DOES NOT CAUSE AN ENVIRONMENTAL PROBLEM OR POLLUTION OF INLAND FRESHWATERS, COASTAL WATERS AND TERRITORIAL WATERS.
⚠️ R.05	RISK 5. EXISTING COMBINED SEWER WILL BE SURCHARGED BY THE BUILDING.	EXISTING COMBINED SEWER TO BE ABANDONED.

TABLE 2: NOTE TO DEVELOPER	
NOTE REFERENCE	NOTE DESCRIPTION
⚠️ N.01	THIRD PARTY CONFIRMATION IS REQUIRED FOR CONNECTION INTO EXISTING DRAINAGE NETWORKS. PLANNING AUTHORITY TO CONFIRM ACCEPTABLE DISCHARGE LOCATION AND METHODOLOGY.
⚠️ N.02	CELLULAR STORAGE TANK TO BE DESIGNED BY A SPECIALIST. IMPERMEABLE LINER AND AIR VENTS TO BE SUGGESTED BY THE DESIGNER. TANKS HAVE BEEN SUGGESTED TO BE IN LINE WITH THE CIRIA SUDS MANUAL FIGURE 21.6, WITH GRAVEL STRIP THROUGH THE CENTRE OF THE TANK.



KEY PLAN - 1:2500

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KEY

- EXISTING SURFACE WATER SEWER
- EXISTING SURFACE WATER MANHOLE
- - - EXISTING FOUL WATER SEWER
- EXISTING FOUL WATER MANHOLE
- EXISTING COMBINED WATER SEWER
- EXISTING COMBINED WATER MANHOLE
- ⊗ EXISTING COMBINED WATER MANHOLE TO BE ABANDONED
- PROPOSED SURFACE WATER SEWER
- PROPOSED SURFACE WATER MANHOLE
- PROPOSED SURFACE WATER FLOW CONTROL MANHOLE
- PROPOSED SURFACE WATER INSPECTION CHAMBER
- PROPOSED CELLULAR STORAGE
- PROPOSED CHANNEL
- PROPOSED GULLY
- PROPOSED FOUL WATER SEWER
- PROPOSED FOUL WATER MANHOLE
- PROPOSED FOUL WATER INSPECTION CHAMBER
- FOUL WATER HOLDING TANK
- SITE BOUNDARY

Rev	Date	Remarks	EL	TS
01	25.12.2025	FIRST ISSUE		

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Project: EVERYTHING RETREAT
PENDLE VIEW
MELLOR, LANCASHIRE

Title: DRAINAGE LAYOUT

Site	Scale	Designed	Checked	Date
A1	1:200	EL	LS	DEC 25

Drawing Status: PRELIMINARY

Job Number	Originator	Zone	Level	Type	Role	Drawing No.	Rev
25211	PWA	00	XX	DR	C	1001	P01